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To R10 Press Team, Richard Parkin, Sheila Eckman, Judy Smith, Cara Steiner-Riley, Palmer Hough, Jeff Frithsen, Bill Dunbar, Jeff Philip, Dianne Soderlund, Kathleen Deener, Tami Fordham, Phil North, Rachel Fertik, Dennis McLerran, Michelle Pirzadeh, Bob Sussman, Robert Delp, Victoria Rivas-Vazquez, Linda Anderson-Carnahan, Michael Szerlog, Kristin Ryan

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Subject Alaska Journal of Commerce: EPA study is shoddy, sloppy, biased

Kristin brought my attention to the editorial below. **DELIBERATIVE PROCESS**  
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<http://www.alaskajournal.com/Alaska-Journal-of-Commerce/December-Issue-1-2012/EDITORIAL-Reviews-in-EPA-study-is-shoddy-sloppy-biased/>

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## **EDITORIAL: Reviews in: EPA study is shoddy, sloppy, biased**

ANDREW JENSEN, MANAGING EDITOR

Roy Stein is no fan of the Pebble mine.

Stein, a fisheries scientist from pretentiously prefixed “The” Ohio State University, penned a recent report describing arguments of mine developers and responsible resource development advocates as “specious,” “disingenuous” and “indefensible,” in addition to calling the prospect of other mines around Pebble “insidious.”

Such rhetoric from the opponents of Pebble is hardly uncommon, and anything but newsworthy on its own.

Stein, however, isn’t a typical Pebble opponent. Stein was not only a member of the peer review panel that examined the Environmental Protection Agency assessment of potential impacts from mining in the Bristol Bay watershed, he was also the chairman.

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While Stein was tasked with reviewing the quality of the EPA assessment, he instead used much of his peer review as an emotional diatribe against the Pebble developers and permitting process advocates, and pronounced himself more of a cynic than a skeptic when it comes to the regulatory system.

To be sure, many of the reviewers stated that the EPA underestimated risks from mining to wildlife, flora, fauna, fish species other than salmon and human users other than Alaska Natives. But equally sure is that this was hardly a ringing endorsement of the agency's work.

Among the 12 peer reviews, Stein's stood out not only for its lack of objectivity or attention to the assigned task, but for his eagerness to spout off on subjects for which he himself repeatedly wrote he had no expertise.

Rather than critique the EPA work, as he was paid by our tax dollars to do, Stein actually offered advice to the government on how to counter mining company arguments.

Referencing the position of mining proponents that failures at old mines cannot be applied directly to risks at Pebble because new technology and best practices will be applied, Stein wrote: "In my view, this is a specious argument and one that should be roundly put to bed by the authors."

At one point in his review, Stein showed he was not aware of reclamation bonding, and at another point suggested that Alaska Natives have "surely" been negatively affected by development, writing "perhaps the Fraser River?"

It is a serious enough problem that someone came to chair a peer review panel on mining impacts in Alaska without knowing what a reclamation bond is or even that the Fraser River is in Canada, but what is more troubling than Stein's lack of basic knowledge and professionalism is how the EPA is incorporating his review into its continuing work on the Bristol Bay assessment that it now says will be used to inform the agency's options under the Clean Water Act.

In its "Summary of Key Recommendations from Peer Reviewers," the EPA placed heavy emphasis on Stein's comments (without attributing them to him) to the exclusion of far more substantive and insightful statements from other peer reviewers.

This was most obvious under the section for technical content revisions to the hypothetical mine scenario used in the assessment. The hypothetical mine was criticized on several fronts by multiple reviewers, yet four of the six bullet pointed "recommendations" highlighted by the EPA came straight from Stein's review despite his admitted lack of experience in mine engineering, management or reclamation.

The EPA grudgingly included the recommendation that it needs a more thorough discussion of what are best mining practices — this after asserting in the Executive Summary that its hypothetical mine reflected "best" practices but in the actual assessment described them as "good, but not necessarily best" practices.

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Not content to simply take its medicine from the reviewers and move on, the EPA then incorporated Stein's assertion that "without a track record of 'best' practices, we cannot assume that technology, by itself without appropriate operational management controls, can always mitigate risk."

Nowhere did the EPA highlight the problems with the mine scenario raised by Dirk van Zyl, a mining engineering professor at the University of British Columbia.

Van Zyl noted the scenarios for waste rock management were entirely inconsistent (at one point saying waste rock would be stored in open pit, at another saying waste rock would be milled and placed in the tailings storage facility); its water balance calculations were incorrect; and that EPA stated non-acid generating rock will require wastewater treatment in perpetuity.

"If all the (possible acid generating) material will be removed from the surface, as stated in the scenario in Chapter 4, and all the (non-acid generating) will not generate acid drainage, then it is difficult to understand why the waste rock piles and waste rock used for construction would be the major source of 'routinely generated wastewater,'" van Zyl wrote.

Van Zyl, as a mining expert, could be expected to be more critical of the EPA mining scenario, but he wasn't alone among his peer reviewers.

William Stubblefield, Oregon State University, toxicology expert: "Although interesting, the potential reality of the assessment is somewhat questionable. It is also unclear why the EPA undertook this evaluation, given that a more realistic assessment could probably have been conducted once an actual mine was proposed and greater detail about operational parameters available."

Phyllis Weber Scannell, Scannell Scientific Services, fish biology: "Some of the assumptions appear to be somewhat inconsistent with mines in Alaska. In particular, the descriptions of effects on stream flows from dewatering and water use do not account for recycling process water, bypassing clean water around the project, or treating and discharging collected water."

John Stednick, Colorado State University, watersheds: "A large tailings storage facility failure compared to a blocked road drainage culvert. The level of detail in the assessment of the potential system failures varies considerably and baits the question — why? Does this demonstrate lack of understanding of failure prediction, lack of failure prediction, or writing team expertise?"

Stubblefield also noted the elementary findings of the risk assessment for multiple mines: "Short of concluding that 'failures at one mine could be bad, and failures at multiple mines could be worse,' little else could be concluded."

A number of reviewers observed that the EPA was using logging road impact studies from the 1970s to characterize risks from a mine transportation corridor, that it was using oil and diesel pipelines as a substitute for risk assessment of a slurry concentrate pipeline (while not, strangely,

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evaluating risks posed by actual diesel transport pipelines that could be in place) and there was unanimous sentiment to not use the Mt. St. Helens eruption as an analogy to a tailings dam failure.

Even Stein, the unabashed cheerleader for the EPA effort, said the agency was on “tenuous” ground in assessing risk based on the high level of uncertainty throughout the report.

I’d hope the EPA was at least somewhat embarrassed to include among its recommendations — based on consensus among its reviewers — that it must clarify the purpose of the document and rewrite the Executive Summary so that it matches the content of the report.

Let’s face it: something is wrong when two main recommendations from a peer review are to define the purpose and make the Executive Summary reflect the actual results of the study.

Two Stein comments that were showcased by the EPA, though, are so far short of the scientific rigor the agency claims it adheres to that they must be exposed.

Under the technical content revision peer reviewer recommendations for risk to salmonids, the EPA writes under the first bullet point to “reflect on the non-linear nature of the relationship between habitat at salmon production; 5% of the habitat could be critical and thus responsible for 20% or more of salmon recruitment.”

Here is what Stein wrote: “This exercise also will serve to counter the argument by the mining company that they are only destroying some small percentage of salmon habitat and hence ... only some very small percentage of salmon. Because losing 2% of critical headwaters may translate to huge losses of salmon (say 20%), one cannot simply assume a linear relationship between habitat and salmon.”

So, Stein pulls the 20 percent number out of his, um, hat, and the EPA blithely places it into the highlighted recommendations of peer reviewers as if that number is based on actual data.

The second bullet point under risks to salmonids states: “Include a section on the impact of Global Climate Change with explicit reference to a monitoring program that will allow scientists, if the mine is built, to distinguish between effects of climate change and mining effects on the physical and biological components of the ecosystem.”

Here is what Stein wrote: “My concern is that if the mine is built, all negative impacts of the mine on salmonids, etc., could be attributed to Global Climate Change rather than the true culprit which would be the mining activities.”

It was natural that Stein’s climate change preoccupation and anti-Pebble attitude found a receptive audience and prominent inclusion in the peer review summary from the EPA assessment lead manager Richard Parkin of Region 10 in Seattle.

Parkin also leads environmental justice efforts for EPA Region 10 and has had addressing Pebble on his to-do list since at least 2008.

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Back in 2000, Parkin wrote a letter to the Department of Transportation finding fault with a draft environmental impact statement for a highway bypass in Issaquah, Wash., because the EIS didn't include "the proposed project's contribution to the serious problem of global warming."

"As a transportation solution, the bypass offers no means to lessen or curtail the use of POVs (privately owned vehicles), consequently any emissions of greenhouse gases anticipated from easing congestion on Front Street will be more than offset by increasing vehicle miles traveled" resulting from increased vehicle capacity and "no incentives" to change travel behavior, Parkin wrote.

If Parkin doesn't believe that something as simple as a highway bypass can be built without destroying the planet, it is not an unreasonable conclusion that he is looking far from objectively at the Pebble prospect.

Parkin and Stein would certainly have that in common, and based on the presentation of peer review recommendations it is clear the only thing "insidious" going on here is the EPA attempt to convince us that it is engaging in a fair process.

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